

## ABSTRACT OF THE DISCLOSURE

A method is provided of optimizing a software program for a target processor in order to meet specific performance objectives and yet maintain portability, where the software program is initially coded in a high-level language. The method

5 includes a first step of optimizing the software program in the high-level language, using optimizations that are substantially independent of the target processor to host the application. Preferably, if the performance objectives are met after the completion of this step, then the process preferably successfully terminates.

However, if the performance objectives are not met, then the method preferably  
10 proceeds to a second step. In the second step, the initially optimized form of the software program is again optimized in the high-level language, although target processor-dependent optimizations are used. If the performance objectives are met after completing this second step, then the process preferably terminates. If the performance objectives are not met, then the process proceeds to a third step. In  
15 the third step, the twice-optimized software program is optimized using a low-level language of the target processor on key portions of the code, such that although the software implementation becomes target-dependent, it remains relatively portable.